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THE LONDON CITY POLICE FORCE

*Switch to Alternative Fuel
Saves Tax Dollars*

A decision by the police
force in London, Ontario,
to convert much of its
fleet to operate on
propane has saved
taxpayers millions
of dollars in fuel costs.



About the fleet

In 1982, the London City Police Force tested propane as an automotive fuel in two of the force's fleet vehicles. The results were so encouraging that the following year all uniform patrol vehicles and unmarked cars were converted to run solely on propane.

Today, 72 per cent of the vehicles in the fleet run on propane (the remaining vehicles have not been converted because they have low annual mileage or because they are used in surveillance projects and, as propane vehicles, cannot be adequately camouflaged). The 92 propane-powered vehicles consist of 72 full-size sedans, 3 one-ton trucks, 5 four-wheel drive vans, 2 step vans, 2 half-ton pickup trucks and 8 half-ton vans.

service

Excellent vehicle performance and fuel-cost savings

Gar Irwin, who manages the London City Police Force fleet, reports that the performance of the propane vehicles compares favourably with gasoline-powered vehicles. Each year, the horsepower of all the vehicles converted to propane is tested and compared to the horsepower rating prior to conversion. In 1994, the vehicles were tested at engine speeds of 3 200 to 3 300 revolutions per minute and registered 117 horsepower on gasoline and 110 horsepower on propane.

Vehicle acceleration is also tested. For vehicles converted in 1994, the test revealed that a vehicle running on propane was only 0.5 seconds slower in going from 0 to 60 kilometres per hour at full throttle than an identical vehicle running on gasoline.

If the performance of the propane patrol vehicles is impressive, the fuel-cost savings are remarkable. In the 12-year period between 1983 and 1994 (inclusive), the London City Police Force estimates savings of close to \$2 million from using propane rather than gasoline. Fuel savings over the 160 000-kilometre life of a typical patrol vehicle are calculated on page 3.

Preventive maintenance important

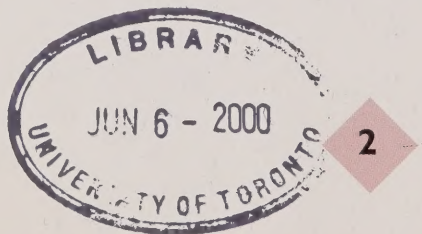
The London City Police Force uses fleet maintenance software to keep track of which vehicles are due for service and when. Mr. Irwin identifies this strict preventive maintenance program as one of the keys to the success of the conversion program, noting that propane has contributed to longer spark plug life, fewer oil changes and enhanced



"Police Package" simplifies conversions

Ford and General Motors both offer a "Police Package" for certain vehicles, which allows

propane equipment to be installed without additional modifications to the suspension and with minimal changes to the trunk cavity. The major components of the propane conversion kit



include an intake-mounted mixer, a converter, a lock-off valve and a 94-litre fuel tank. In the case of the London police vehicles, the fuel tank is bolted to the chassis rails and located as close as possible to the rear axle. To permit this, the front half of the trunk tub cavity is removed, and 50 per cent of the tank height is located within the

trunk's lower cavity. A custom-fabricated and welded steel panel and skid plate are then placed over and under the tank, respectively. This results in considerable ground clearance and plenty of functional trunk space.

Propane Costs:

A vehicle driven 160 000 kilometres would consume 48 515 litres of propane (based on a fuel consumption rate of 30.3 litres per 100 kilometres).

48 515 litres of propane at \$0.2107 (average cost) = \$10,222

Gasoline Costs:

A vehicle driven 160 000 kilometres would consume 41 237 litres of gasoline (gas consumption is typically 85 per cent of propane consumption).

41 237 litres of gasoline at \$0.5058 (average cost) = \$20,857

Estimated Savings:

Gross savings (\$20,857 - \$10,222)	\$10,635
Less cost of conversion:	\$ 3,047
Subtotal:	\$ 7,588
Plus Government of Ontario sales tax rebate:	\$ 750
Plus Government of Ontario gas guzzler rebate:	\$ 75

NET FUEL-COST SAVINGS PER VEHICLE

\$8,413

engine life. The extended engine life means the vehicles have high demand and value on the resale market. In fact, the force has a waiting list for its used patrol vehicles, which are sold by sealed bid, often to taxi companies.

All of the propane vehicles are stored in an underground garage that is equipped with special safety devices to detect fuel leaks. Garage attendants are responsible for fuelling the vehicles and for providing the scheduled maintenance.

payback

Safety and the environment

Since the conversion program began, the London City Police have had no safety problems related to the use of propane fuel or equipment. Although the force's patrol vehicles have experienced collisions from all angles and some vehicles have been damaged beyond repair, the propane tanks, fuel lines and other conversion equipment have withstood the abuse.

The London City Police are proud to be setting an example by addressing environmental concerns related to gasoline consumption. Compared to gasoline, propane fuel produces fewer greenhouse gas emissions and air pollutants. By using an alternative transportation fuel, the force is also reducing the demand for crude oil and taking advantage of Canada's abundant propane resources.

"Our experience with propane has been a resounding success and has saved the Corporation of the City of London millions of dollars," concludes Mr. Irwin. "We intend to continue to use propane for as long as it remains cost-effective."



For more information on
fleet energy-saving opportunities,
please write to

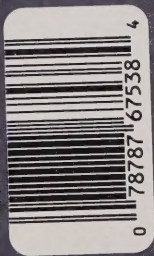
FleetSmart
Natural Resources Canada
580 Booth Street, 18th floor
Ottawa, Ontario
K1A 0E4

fax your request to
(613) 952-8169

or e-mail
Fleet.Smart@es.nrcan.gc.ca

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